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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,967	02/02/2006	Gerhard Wolf	285132US0PCT	9432

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EXAMINER	
AHVAZI, BIJAN	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
05/20/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/566,967	WOLF ET AL.	
	Examiner	Art Unit	
	Bijan Ahvazi	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,14,16,18,20,22,24 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13,14,16,18,20,22,24 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/02/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of Group I, claims 13, 14, 16, 18, 20, 22 and 26 with traverse in the reply filed on 04/27/2009 is acknowledged. The inventions listed as Groups I and II, II or IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature between Groups I and II is a process for the treatment of leather, comprising:(a) applying at least one cationic or amphoteric aqueous treatment composition to leather by roll coating and/or roll application and/or spray application with or without simultaneous use of organic and/or inorganic pigments and/or anionic leather treatment compositions and thus the Groups lack unity. See Schmidt *et al.* (Pat. No. US 4,775,385) Kuwabara *et al.* (Pat. No. US 5,676,707), Buckman *et al.* (Pat. No. US 4,054,542), Natoli *et al.* (Pat. No. US 5,709,714). The requirement is still deemed proper and is therefore made **FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 13, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707).

Regarding claims 13, 14 and 24, Schmidt *et al.* teach a process for dyeing leathers, comprising treating the leather with a polyamide-amine (water-soluble cationic polymers) (Col. 6, line 50-52), follow by addition of anionic leather treatment composition (Col. 8, lines 18-30) in

a rotating tanning drum as a uniform rate (Col. 8, line 25), wherein after tumbling, 7% of commercially available fat-liquoring mixture is added as shown in Example 6 (Col. 8, lines 25-27). Thereafter the dyed leather is dried in air, was mechanically finished (Col. 8, lines 30-31). However, Schmidt *et al.* do not expressly teach applying the composition to leather by roll coating and/or roll application and/or spray application.

Kuwabara *et al.* teach applying water-soluble resin materials onto the leather by various methods such as a method in which any of the materials formed into an aqueous solution is sprayed by means of a spray gun, coated by means of a bar coater, a roll coater an applicator, a doctor blade or the like, or applied by screen printing, and a method in which any of the materials formed into a film is contact bonded (Col. 5, lines 54-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* with applying the composition materials onto the leather by various methods as taught by Kuwabara *et al.* in order to provide decrease in viscosity or in surface tension of soluble resin to achieve easier penetration and further to produce a uniform piece of leather (i.e. retanning) for improvements to the fullness of the leather, the tightness and smoothness of the grain, the break, the levelness and intensity of the dye shade, better uniformity in temper or flexibility, better wettability and additional stability against water and perspiration.

4. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claim 13, 14 and 24 above, and further in view of Buckman *et al.* (Pat. No. US 4,054,542)

Regarding claim 16, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. However, Schmidt *et al.* and Kuwabara *et al.* do not expressly disclose wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is an epichlorohydrinamine polymer.

Buckman *et al.* teach cationic, water-soluble, amine-epichlorohydrin polymer compositions and to the uses of these polymers in the pulp and paper industry to improve drainage, provide retention of fiber fines, dyes, pigments, fillers, starch, and gum and increase strength. In addition, said polymers are useful as resins in the manufacture of electroconductive paper and the sizing of paper and paperboard as well as the separation of minerals in ore processing operations (Col. 1, lines 7-12), wherein the reaction products involving polymeric precursor and mono-tertiary amines may be as low as 500 whereas the polymers made with di-tertiary amines may have molecular weights as high as 50,000 to 500,000 (Col. 5, lines 42-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* with epichlorohydrinamine polymer as taught by Buckman *et al.* in order to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross-linking reagents and further to provide novel cationic water-soluble, amine-epichlorohydrin polymers as compare to polyethylenimines which requires the use of the very toxic monomer ethylenimine which, in recent years, has been described as a carcinogen, and severe restrictions have been placed on the handling of the monomer in commercial and industrial plants by government regulatory agencies.

Regarding claim 22, Buckman *et al.* teach the primary amines which have been found to be satisfactory for the reaction with epichlorohydrin to form the polymeric precursor include aliphatic, alicyclic, and alkylaromatic amines which may be substituted by hydroxyl or chloro groups or contain carbon to carbon double bonds. The aliphatic groups in these amines may be straight or branched chains (Col. 4, lines 38-44). Examples of these amines are given such as isopropylamine (Col. 4, line 56-63). It is held to be a ***prima facie*** case of obviousness since a person of ordinary skill in the art would have recognized the interchangeability of the element (i.e. functional group) shown in the prior art as taught by Buckman *et al.* (Col. 4, line 56-63) for the corresponding element disclosed in the specification wherein the side chains syntheses merely done by routine experimentation.

5. Claims 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claim 13, 14 and 24 above, and further in view of Ohno *et al.* (Pat. No. US 6,809,147 B1).

Regarding claims 18, 20, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. However, Schmidt *et al.* and Kuwabara *et al.* do not expressly disclose wherein the cationic or amphoteric aqueous treatment composition used in process step (a), the ratio of amine units (comprise from 0.5 to 0.8 part of dimethylaminopropylamine and from 0.2 to 0.5 part of benzylamine) to epichlorohydrin units being from 0.8:1.2 to 1.2:0.8.

Ohno *et al.* disclose polyamine modified compound, including: reaction products of the following (a)-(c): a) aliphatic polyamine (Col. 4, lines 62-64) such as dimethylamino propylamine (Col. 4, line 64), b) a cyclic amine or aromatic polyamine which has at least one NH_2 or NH group (Col. 5, lines 2-4) such as benzylamine (Col. 5, line 11)and reaction products

of said aliphatic polyamine (a), said amine (b) and epoxide compound (d) which includes glycidyl ether obtained by reaction of epichlorohydrin with polyhydric phenol (Col. 5, lines 25-28) wherein (a)=1 mole; (b)=0.5-5 moles; and (NH_2 and/or NH contained in (a) and (b))/(epoxy group contained in (d)) is equal to 1/0.3-0.9 (Col. 5, lines 50-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al.* in view of applying the composition materials onto the leather by various methods by Kuwabara *et al.* with epichlorohydrinamine polymer as taught by Ohno *et al. et al.* in order to manufacture various molecular weight ranges polymer by the selection of different catalysts and the use of cross linking reagents, since the reaction between the amines and monoepoxides is usually effected merely by brining the components together in proper proportions. It is held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie,* 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt *et al.* (Pat. No. US 4,775,385) in view of Kuwabara *et al.* (Pat. No. US 5,676,707) as applied to claim 13, 14 and 24 above, and further in view of Natoli *et al.* (Pat. No. US 5,709,714).

Regarding claim 26, Schmidt *et al.* and Kuwabara *et al.* discussed all the features as above. However, Schmidt *et al.* and Kuwabara *et al.* do not expressly disclose wherein the cationic or amphoteric aqueous treatment composition used in process step (a) is applied only to the crust surface of the leather.

Natoli *et al*. disclose a method of treating a tanned leather stock (Col. 15, line 58) wherein retanning said tanned leather stock with particles of an amphoteric polymer dispersed in an aqueous medium to produce a retanned leather stock having improved color expression characteristic (Col. 15, lines 59-62). After retanning or, if desired, during retanning, the hide is colored with colorants, such as, acid dyes, mordant dyes, direct dyes, metalized dyes, soluble sulfur dyes, and cationic dyes. Colorants include natural pigments and synthetic dyes that are used to achieve the required color in both the cross section and the surface of crust leather before the finishing step (Col. 2, lines 22-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a process for dyeing leathers by Schmidt *et al*. in view of applying the composition materials onto the leather by various methods by Kuwabara *et al*. with the required color in both the cross section and the surface of crust leather before the finishing step as taught by Natoli *et al*. in order to produce a retanned leather stock having improved color expression characteristic.

Examiner Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijan Ahvazi, Ph.D. whose telephone number is (571)270-3449. The examiner can normally be reached on M-F 8:0-5:0. (Off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information

regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BA/
Bijan Ahvazi,
Examiner
Art Unit 1796

05/14/2009

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796